

[illegible]

15 utilizing the stored spanning tree port states of the ports at the standby supervisor
16 to run the spanning tree protocol at the standby supervisor.

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9. The method of claim 8 further comprising the steps of:
notifying standby supervisor of the port change state event and the sequence number; and
storing, at the standby supervisor, the second spanning tree port state for the given port and the corresponding sequence number.

1 10. The method of claim 9 wherein the step of executing the consistency check
2 comprises the step of comparing the one or more sequence numbers stored by the ports
3 with the sequence number stored by the standby supervisor.

1 11. The method of claim 9 further comprising the steps of:
2 clearing each port change state event upon directing the given port to change
3 spanning tree port states;
4 in response to the failure at the active supervisor, designating any port change
5 state events not cleared by the failed active supervisor as open events; and
6 for each open event:
7 storing, at the standby supervisor, the second spanning tree port state for
8 the given port; and
9 directing the given port to change spanning tree port states as specified in
10 the open event.

1 12. The method of claim 1 wherein, in response to the failure at the active super-
2 visor, the standby supervisor elects the at least one root and directs the ports to transition
3 among the spanning tree port states.

1 13. The method of claim 12 wherein the step of running the spanning tree proto-
2 col at the standby supervisor comprises the steps of:
3 generating a plurality of configuration bridge protocol data unit (BPDU) mes-
4 sages; and
5 forwarding the BPDU messages from the ports of the network device,
6 wherein the BPDU messages include a Topology Change (TC) flag field, and the
7 TC flag field is asserted.

1 14. The method of claim 4 wherein the non-forwarding spanning tree port state of
2 the transitioning step is one of blocking and listening spanning tree port states.

4 means, responsive to a crash or failure at the active supervisor, for running the
5 spanning tree protocol at the standby supervisor utilizing the spanning tree port states
6 stored at the standby supervisor.

1 20. The intermediate network device of claim 19 further comprising means, re-
2 sponsive to a crash or failure at the active supervisor, for designating the standby supervi-
3 sor to be a newly active supervisor, whereby, in response to the crash or failure at the ac-
4 tive supervisor, the newly active supervisor elects the at least one root and directs the
5 ports to transition among the spanning tree port states.

1 21. The intermediate network device of claim 18 wherein the informing means
2 comprises:

3 a first event manager disposed at the active supervisor, the first event manager
4 configured to generate port change events in response to the ports transitioning from a
5 current spanning tree port state to a new spanning tree port state;

6 a second event manager disposed at the standby supervisor; and

7 means for passing the port change events from the first event manager to the sec-
8 ond event manager.

1 22. The intermediate network device of claim 21 wherein each port change event
2 generated by the active event manager identifies the respective port and the new spanning
3 tree port state.

1 23. The intermediate network device of claim 17 whereby the active supervisor
2 does not inform the standby supervisor of the at least one elected root within the com-
3 puter network.

1 24. A computer readable medium containing executable program instructions for
2 continuing operation of a spanning tree protocol (STP) despite crashes or failures at an

25. The computer readable medium of claim 24 wherein the programming steps for informing comprises the programming steps for:

generating, at the active supervisor, a port change event in response to a given port transitioning from a first spanning tree port state to a second spanning tree port state;

associating the port change event with a corresponding sequence number;

1 29. The intermediate network device of claim 28 further wherein
2 in response to a detection of a crash or failure at the active supervisor the standby
3 supervisor is designated to be a newly active supervisor, and
4 the STP engine at newly active supervisor elects the at least one root and directs
5 the ports to transition among the spanning tree port states.